HARRIS
Electronic Systems

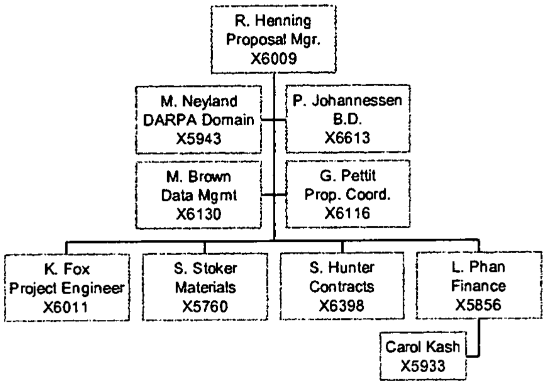
NVT2- Proposal Kickoff

Technical & Cost

25 September 1998

EXHIBIT 01

Proposal Structure



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NVT2 - Background

Program Name: NVT-2 (Information Assurance for the Next Generation Information Infrastructure BAA)

Customer: DARPA/ISO/Information Infrastructure/Information Assurance

Program Manager: O. Sami Saydjari (on assignment from NSA)

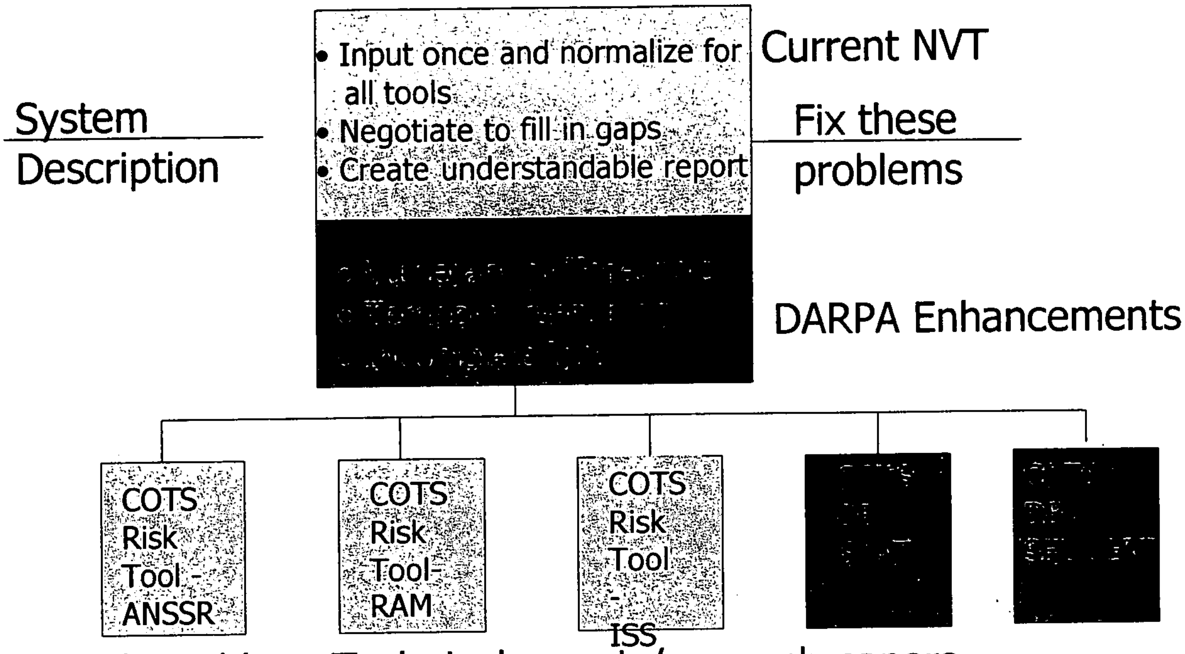
Program Value: $1M, 18 month schedule, CP/LOE
3 1-month options for ACTD Support
($11M confirmed in pool, expect at least 8 awards)
Usually MIPR to RL for execution

Schedule: 10 September- Announcement
30 October - proposal submittal
15 December - initial contractor selections expected
28 February - contract award

Scope of Work

- Building off of the NVT Study:
  - Augment NVT prototype with new functionality:
    - temporal based reasoning
    - vulnerability thresholds
    - reasoning with uncertainty or incomplete data
  - Incorporate vulnerability databases:
    - SEI/CERT Database
    - STAT from GCSD
    - Possibly later version of RAM

NVT Concept



System Description

- Input once and normalize for all tools
- Negotiate to fill in gaps
- Create understandable report

[redacted]

Current NVT

Fix these problems

DARPA Enhancements

COTS Risk Tool - ANSSR

COTS Risk Tool- RAM

COTS Risk Tool - ISS

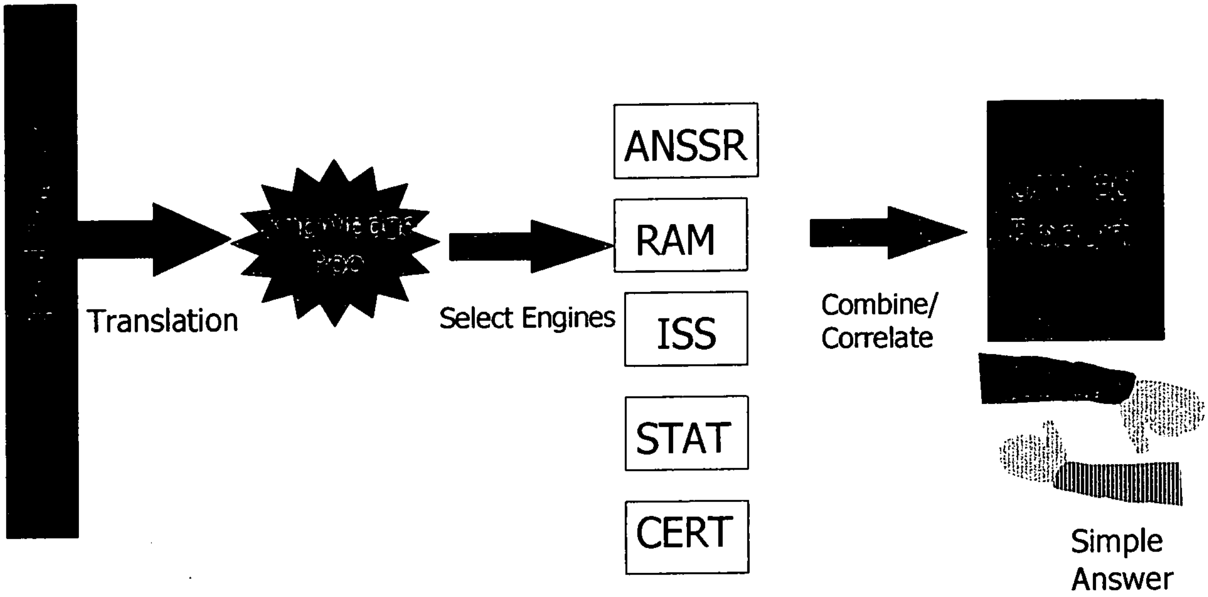
[redacted]

[redacted]

Deliverables: Technical reports/research papers

POC 6 month incremental prototypes to completion.

NVT Architecture



Cost Approach

- Scientific and Technical Merit
- Potential contribution and relevance to DARPA Mission
- Capabilities & related experience
- Plans and capability to accomplish technology transition
- Best Value

Cost Strategy:

Technically superior, can't live without it, priced in line with historical value of previous awards ($1M -1.2M)

Best resource mix over life of program:

Travel
Materials
Labor

Proposal Schedule

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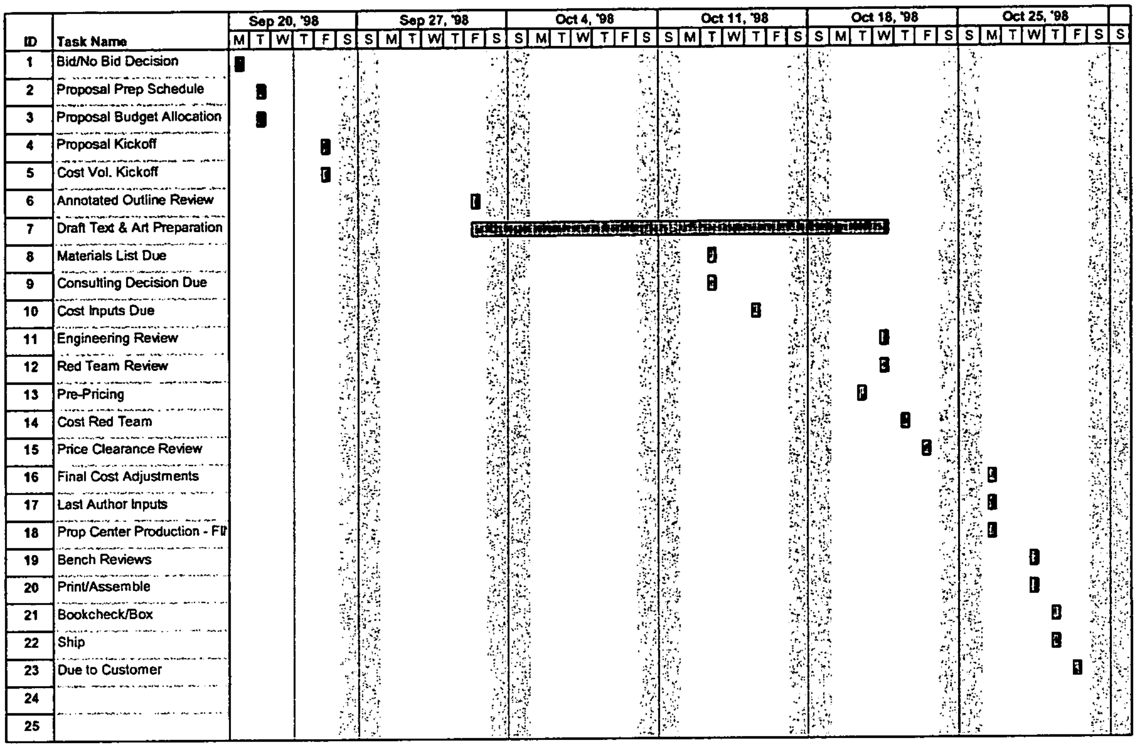

ID	Task Name
1	Bid/No Bid Decision
2	Proposal Prep Schedule
3	Proposal Budget Allocation
4	Proposal Kickoff
5	Cost Vol. Kickoff
6	Annotated Outline Review
7	Draft Text & Art Preparation
8	Materials List Due
9	Consulting Decision Due
10	Cost Inputs Due
11	Engineering Review
12	Red Team Review
13	Pre-Pricing
14	Cost Red Team
15	Price Clearance Review
16	Final Cost Adjustments
17	Last Author Inputs
18	Prop Center Production - Fi
19	Bench Reviews
20	Print/Assemble
21	Bookcheck/Box
22	Ship
23	Due to Customer
24	
25	

DARPA ISO - Battlefield Awareness

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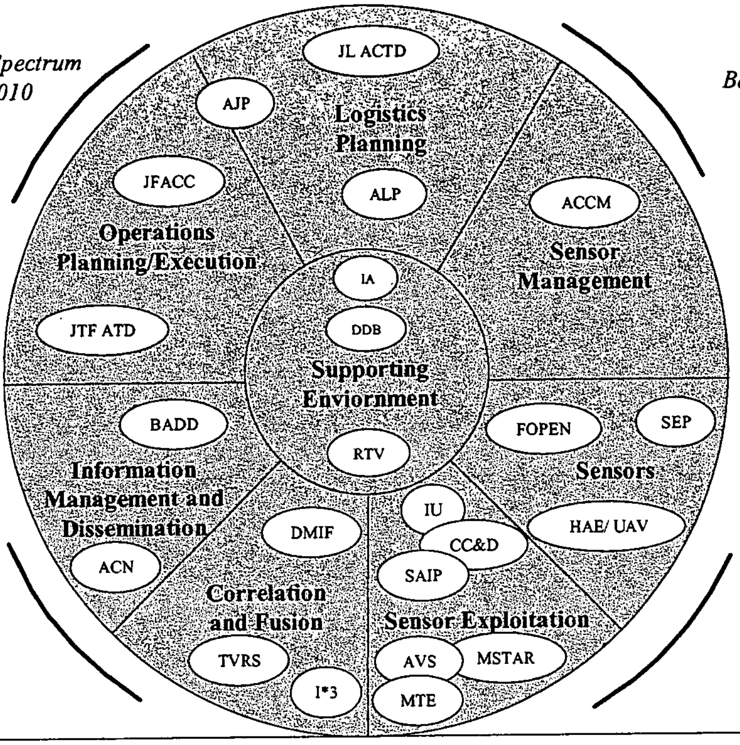
Goal:
Dominate the Conflict Spectrum
JCS Joint Vision 2010

Enabled By:
Comprehensive
Battlespace Awarness



NVT2, •

Capture Strategy

Leverage Network Vulnerability Tool (NVT)

- Sizeable advantage/funded headstart
  - RL study (RL is DARPA's agent for this technology)
  - Quarterly review in July -- with interested organizations
- DARPA Feedback
  - "You have enough ideas here to fund a major DARPA program by yourself
- Only non-DARPA sponsored attendee at DARPA workshop
  - Feedback side session with Sami
- Competing Program: IOPS for ESC -- unawarded
- Possibly include a HPKB consultant for correctness
- Incorporate GCSD's STAT vulnerability database

Competive Assessment

- Awards on merit -- no head to head competition
- Probable submitting companies
  - Boeing
  - GTE/BBN
  - SRI
  - TIS Labs @Network Associates
  - Trident Data Systems?

WIN THEMES

We have been conducting ongoing research in this area for 2 years.

NVT provides a clean, modular framework, readily expandable.

No one tool can cover everything, so why not use multiple tools to get a better answer?

With the enhancements of NVT2, the environment can be:

a design tool for new networks
an assesment tool for existing networks
a way to prioritize problems
a predictive IW probability of attack tool

New technological developments/threat models fit

Application of message understanding, data fusion, and KBMS technologies is innovative in the IA domain -- and we've been doing it!
Not a shotgun wedding.

Long term vision

- NVT becomes the standard vulnerability environment
  - Combines GOTS/COTS into unique capabilities
- CORE technology for ISO/IA
  - Before every system gets turned on,
  - Use NVT to validate risk posture
- Eventual inclusion as NGII standard environment

Proposal Assignments/Pgs.

Section	Pg Count	Author
A. Cover Page	1	Henning
B. Exec Summary	1	Henning
C. Proposal Roadmap	2	Henning
D. Cost & Fee Roll-up	1	Henning/Phan
E. Innovative Claims	1	Henning/Fox
F. Sow	20	Henning/Fox/Neyland
G. Results	1.5	Fox
H. Milestones & Schedule	1	Fox
I Technical Plan	8	Henning/Fox
J. Demo & Integration	1.5	Henning
K. Relevant Capabilities	5	Neyland
L. Management App.	5	Neyland
M. GFE/GFI	.5	Hunter
N. Proprietary Claims	.5	Hunter

Risks/Mitigation

Risk	Probability	Mitigation Strategy
NVT Prototype fails to meet expectation	Low	Manage expectation through prototype replan (in progress)
Unable to transfer hardware from NVT 1	Moderate	State in assumptions, add to materials pool (<$30K)
Using tool on a "real" ISO program	Low	Use positions on DDB & AVS to gain architecture knowledge

Selection Criteria

Award Criteria: Integrate existing and emerging technologies or fill the current identified gaps, and be able to accommodate new/emerging technologies.

Identified 6 Technology areas:

1. Advanced Boundary Controllers
2. Monitoring and Threat Detection
3. **Vulnerability Assessment**
4. Malicious Code Detection
5. Risk Management/DSS
6. Response and Recovery

Key: Relevance to other programs in ISO:

JFACC AIM AICE DMIF
ALP GENOA AVS
JTF-ATD BADD DDB

Integration of results from DARPA/NSA

NOTE: NSA CRADA for NVT pending

CDRL List

- Monthly cost and status
- Major build reports
- Lessons learned from demo tasks
- Final report
- Draft & final user's documentation
- Prototype system as residual

Cost Volume Data

NVT2 - CP/LOE, Study

Software - LOE, organic study
Only prior history is NVT1 (ongoing)
Analogous programs -- ART-X, ENDS, IA4DB
Hardware - Generic Windows NT PC's.

CDRLS -

- Monthly cost and status - 20 pg.
- Major build reports 20 pg.
- Lessons learned from demo tasks 20 pg
- Final report - 75 pg.
- Draft & final user's documentation 100 pg.
- Prototype system as residual

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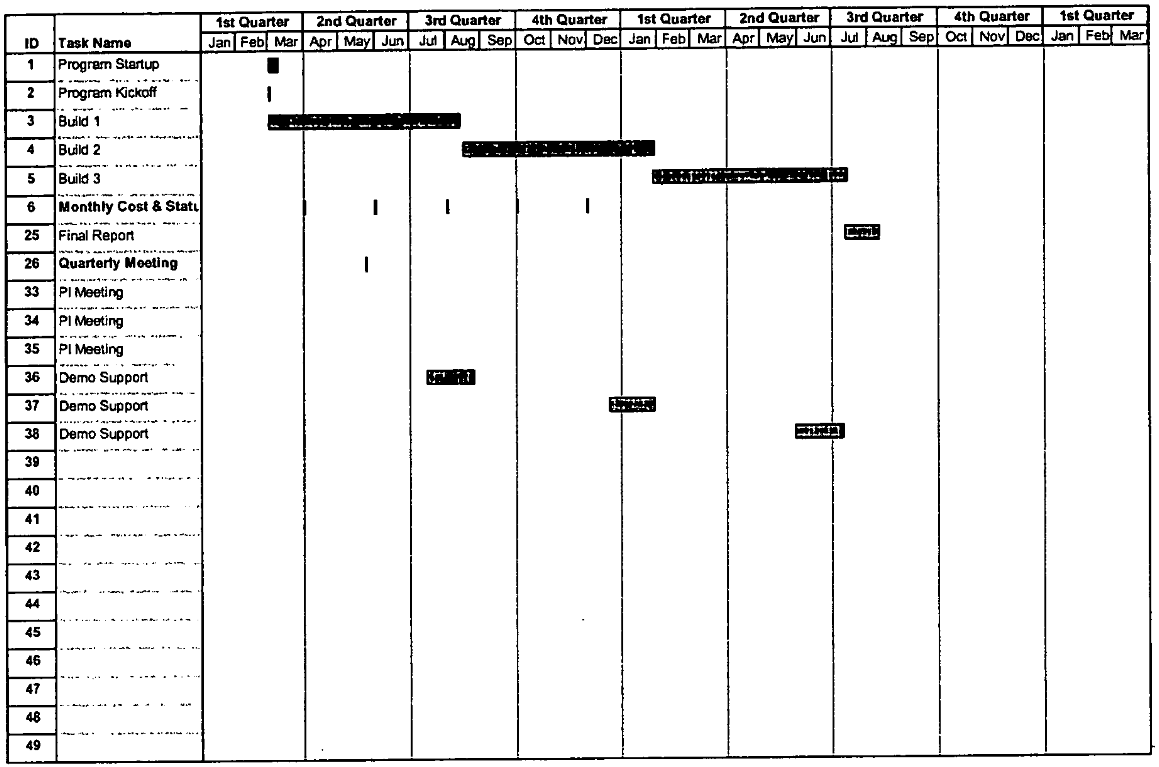
Project Schedule



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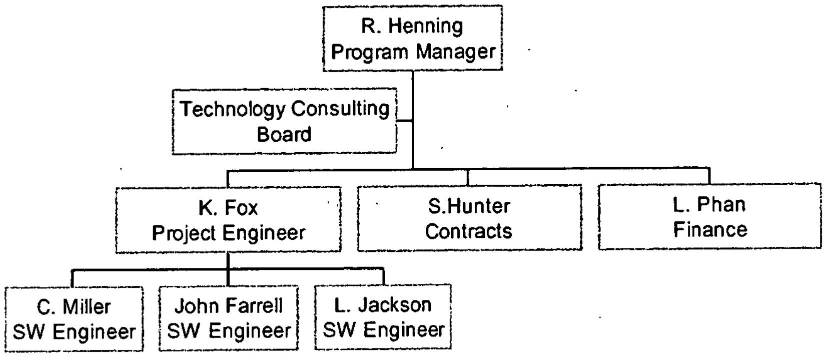
Project Organization/Mgmt



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Technology Consulting Board

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L. Phan
Finance

C. Miller
SW Engineer

John Farrell
SW Engineer

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SW Engineer

Manage as an organic study. Get our technology board to brainstorm/exchange ideas, etc.

NVT2 WBS

NVT-2
01

	Mgmt. Support& CDRLS	Build 1	Build 2	Build 3	Final Report	Integrated Demos
PMO 01	01-01-01	▨	▨	▨	▨	▨
ENG 02	01-01-02	01-02-02	01-03-02	01-04-02	01-05-02	01-06-02
Material Admin 03	01-01-03	01-03-02	01-03-03	01-03-04	▨	▨
Material 04	01-01-04	01-04-02	01-04-03	01-04-04	▨	▨
Travel 05	01-01-05	01-05-02	01-05-03	01-05-04	▨	01-05-06

GFE/GFP

- Assume we can keep the NVT development env.
  - If DARPA MIPRS to RL, could be ECP to NVT-1
  - Or, transfer of equipment (HW & SW Licenses)
- Means the program hits the ground running, no lead time lost
- Otherwise, impact to program of 2-3 down months
  - Waiting for HW/SW to appear after startup.
- Availability of SEI/CERT data in usable form
  - DARPA/RL funding CERT to put data in relational format.
  - Data must be available
  - Fallback -- grab the web pages
    - crude version at best.

Program Meetings

- Program Kickoff
- Quarterly Status (face to face)
  - alternating sites
- Monthly VTC/Telecons
- Every Six Months - PI meetings
  - VTC/Telconference as needed
- Demo Support
  - 30 day scheduled option
  - at completion of each functional build

Cost Targets

- Study rates
- All travel assumed to DC
- Labor hours need for:
  - PM
  - Admin
  - Engineering Support
  - Materials

Cost Bid Instructions

- Creative fictional BOEs
- Capital - none required
- Travel - To DC from Melbourne
- VTC - ??
- Materials - List due by 13 October
  - HW
  - SW packages
  - SW upgrades/maintenance

Finance Assumptions

- No capital required
  - Transfer of development hardware from NVT
- Materials to bid:
  - Extra development workstation/sw license ($7k)
  - SW License maintenance pool ($15K)
- Study rates (no hardware/software deliverables)
- Fee @ 10-12%